INDIANA
Epidemiology
NEWSLETTER

Indiana State Department of Health

Epidemiology Resource Center
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Indianapolis, IN 46204
317/233-7416

July 2002
Vol. X, No. 7

New Indiana Law Makes College Students Aware of Meningococcal Disease Risk and Promotes Vaccination

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ISDH Communicable Disease Program

Current Indiana Legislation

As an effect of the control of *Haemophilus influenzae* type b infections, *Neisseria meningitidis* has become the principal cause of bacterial meningitis in children and young adults in the United States, causing both sporadic disease and outbreaks. Outbreaks of meningococcal disease were rare in the United States in the 1980s; however, since 1991, the rate of occurrence of localized outbreaks has increased. From July 1994 through July 1997, 42 meningococcal outbreaks were reported nationwide, four of which occurred at colleges. In spite of this, outbreaks continue to represent less than 3% of the total cases in the United States.

On September 30, 1997, the American College Health Association (ACHA), which represents about half of the colleges with student health services, released a statement recommending that "college health services take a more proactive role in alerting students and their parents about the dangers of meningococcal disease", that "college students consider vaccination against potentially dangers of meningococcal disease", and that "colleges and universities ensure all students have access to a vaccination program for those who want to be vaccinated" (Dr. MarJeanne Collins, Chairman, ACHA Vaccine Preventable Diseases Task Force, personal communication). In a joint study by ACHA and the Centers for Disease Control and Prevention (CDC), surveys were sent to 1,200 ACHA-member schools. Of 691 responding schools, 57 (8%) reported that pre-exposure meningococcal vaccination campaigns had been conducted on their campuses since September 1997.

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On October 20, 1999, the CDC Advisory Committee on Immunization Practices (ACIP) voted to recommend that college students, particularly freshmen living in dormitories, be educated about meningococcal disease and the potential benefits of vaccination. ACIP further recommends that immunization should be provided or made easily available to those freshmen who wish to reduce their risk for meningococcal disease. Other undergraduate students wishing to reduce their risk for meningococcal disease can also choose to be vaccinated.

Recently passed Indiana legislation that addresses what post-secondary institutions in Indiana are to provide students that intend to enroll is outlined below:

SECTION 4. IC 20-12-71-13.5 IS ADDED TO THE INDIANA CODE AS A **NEW** SECTION TO READ AS FOLLOWS **[EFFECTIVE October 1, 2002]: Sec. 13.5. (a) A postsecondary institution in which an individual intends to enroll shall provide detailed information on the risks associated with meningococcal disease and the availability and effectiveness of vaccination to:**

(1) the individual, if the individual is at least eighteen (18) years of age; or

(2) the individual's parent or guardian, if the individual is less than eighteen (18) years of age.

(b) A postsecondary institution described in subsection (a) must receive a certificate of immunity:

(1) that is signed by:

(A) the individual, if the individual is at least eighteen (18) years of age; or

(B) the individual's parent or guardian, if the individual is less than eighteen (18) years of age; and

(2) that states that the information provided under subsection (a) has been reviewed by:

(A) the individual, if the individual is at least eighteen (18) years of age; or

(B) the individual's parent or guardian, if the individual is less than eighteen (18) years of age.

What Is Meningococcal Disease?

Meningococcal disease is a rare but potentially fatal bacterial infection. Invasive meningococcal infections are caused by the bacterium *Neisseria meningitidis*, (also known as meningococcus), a gram negative diplococcus. There are 13 serogroups of *N. meningitidis* (A, B, C, D, 29E, H, I, K, L, W-135, X, Y, and Z). Strains belonging to groups A, B, C, Y, and W-135 are implicated most frequently in systemic disease. The disease is expressed as either meningococcal meningitis, an inflammation of the membranes surrounding the brain and spinal cord, or meningococcemia, the presence of the bacteria in the blood. Meningococcal disease can lead to death within 48-72 hours after onset. Of those who survive, an additional 10% have severe after effects of the disease, including mental retardation, hearing loss, and loss of limbs.

Meningococcal disease strikes about 3,000 Americans each year and is responsible for approximately 300 deaths annually. It is estimated that 100 to 125 cases of meningococcal disease occur annually on college campuses and 5 to 15 students die as a result.

How Is Meningococcal Disease Transmitted?

Meningococcal bacteria are transmitted through the air via droplets of respiratory secretions and by direct contact with an infected person's nasal or throat secretions. Although anyone can be a carrier of the bacteria, data indicate that certain social behaviors, such as exposure to passive and active smoking, bar patronage and excessive alcohol consumption, may put college students at increased risk for invasive disease. Patients with respiratory infections, compromised immunity, those in close contact with a known case and travelers to endemic

areas of the world are also at increased risk. Direct contact is defined as oral contact with shared items, such as cigarettes or drinking glasses, or through intimate contact, such as kissing.

What Are the Symptoms?

The early symptoms usually associated with meningococcal disease may include high fever, severe headache, stiff neck, rash, nausea, vomiting and lethargy, and may resemble influenza. Because the disease progresses rapidly, often in as little as 12 hours, prompt diagnosis and treatment are important to assure recovery.

Why College Students?

Recent evidence indicates that college students residing on campus in dormitories or residence halls appear to be at higher risk for contracting meningococcal meningitis. Research released by the CDC shows that freshmen living in dormitories have a six-fold increased risk for meningococcal meningitis than college students overall.

Table 1. Rates of Meningococcal disease, by risk group – United States, September 1998-August 1999*

Risk group	Number of cases	Population	Rate per 100,000
Children aged 1-5 years	255	14,886,569†	1.7
Persons aged 18-23 years	304	22,070,535†	1.4
Non-college students aged 18-23 years	216	14,579,322†#	1.5
College students	90	14,897,268#	0.6
Undergraduates	87	12,771,228#	0.7
Freshmen¶	40	2,285,001#	1.8
Dormitory residents	45	2,085,618#**	2.2
Freshmen¶ living in dormitories	27	591,587#**	4.6

* Bruce M, Rosenstein NE, Capparella J, Perkins BA, Collins MJ. meningococcal disease in college students. In: Abstracts of the 39th Annual Meeting of the Infectious Diseases Society of America, Philadelphia, PA, November 18-21, 1999:63.

† 1998 census data.

NCES, U.S. Dept. of Education, 1996-1997.

¶ Students enrolled in any postsecondary education for the first time.

** National College Health Risk Behavior Survey (NCHRBS) – United States, 1995.

Cases and outbreaks usually occur in the late winter and early spring when school is in session. From 1980 to 1993, there were 21 outbreaks in the U.S., three of which occurred in colleges. From 1994 to 1996, there were 26 outbreaks, four of which occurred in colleges. Between 1986 and 1993, an outbreak was defined as five cases of the same serotype per 100,000 people with at least three cases occurring within three months. Recent evidence shows the epidemiology of meningococcal disease is changing, with a majority of cases (65%) in the college-age group caused by either serotype C, Y, or W-135, which are all vaccine preventable. Rates of mortality and complications are higher for these serogroups compared to serogroup B, which is not included in the vaccine.

How Can You Prevent and Control Meningococcal Disease?

Data from the CDC demonstrate that college freshmen, particularly those who live in dormitories, are at modestly increased risk for meningococcal disease relative to other persons their age. Vaccination with the currently available quadrivalent meningococcal polysaccharide vaccine, Menomune, will decrease the risk for meningococcal disease among such persons. The quadravalent A, C, Y, W-135 vaccine enhances immunity to four strains of meningococcus that cause 65%-70% of invasive disease and, therefore, reduces a student's risk for disease.

Vaccination does not eliminate risk because:

- the vaccine confers no protection against serogroup B disease, and
- although the vaccine is highly effective against serogroups A, C, Y, and W-135, efficacy is <100%.

The vaccine is safe and adverse reactions are mild and infrequent, consisting primarily of redness and pain at the site of injection lasting up to two days. The duration of the meningococcal vaccine's efficacy is approximately three to five years. As with any vaccine, vaccination against meningitis may not protect 100% of all susceptible individuals. Development of immunity after vaccination requires 7 to 10 days. The vaccine is effective against specific serogroups of meningococcal meningitis, including types A, C, Y, and W-135, with an estimated efficacy of 85%-90% against those groups. It does not protect against serogroup B, which accounts for approximately 46% of meningococcal cases in the U.S.

Other preventive measures that would help protect individuals are:

- good hand washing
- avoid sharing beverage containers, cigarettes, lipstick, or eating utensils
- avoid smoking and smoky environments
- get plenty of sleep, exercise regularly
- eat a balanced diet and avoid excessive alcohol consumption.

The following links offer information for those who are considering vaccination:

www.cdc.gov/nip/publications/VIS/vis-mening.pdf

www.acha.org/projects_programs/overview.cfm

Conclusions

The enaction of the new legislation provides an opportunity for students and parents to make an informed decision. This decision will be based on understanding that college freshmen, especially those who live in dormitories, are at a modestly increased risk for meningococcal disease compared with other persons of the same age, and that vaccination with a quadrivalent meningococcal polysaccharide vaccine will decrease the risk for meningococcal disease. Students and parents are encouraged to confer with their healthcare provider or the prospective post-secondary institution to obtain the polysaccharide vaccine.

References

Control and prevention of meningococcal disease and Control and prevention of serogroup C meningococcal disease: evaluation and management of suspected outbreaks: recommendations of the Advisory Committee on Immunization Practices (ACIP). CDC MMWR 1997; 46(No. RR-5):1—21.

Control and prevention of meningococcal disease and Meningococcal disease and college students: recommendations of the Advisory Committee on Immunization Practices (ACIP). CDC MMWR 2000; 49(No. RR-7):1—22.

Meningococcal Infections. 2000 Red Book: Report of the Committee on Infectious Disease, 25th ed. Pickering LK, ed. Elk Grove IL: American Academy of Pediatrics, pages 396-401.

Meningococcal Disease Among College Students. Centers for Disease Control and Prevention web site, www.cdc.gov.

Indiana State Department of Health
First and Third Grade Oral Health Survey 2002

Hans Messersmith, M.P.H.
ISDH Epidemiology Resource Center

Introduction

To better understand the oral health of Indiana's children and to help determine the appropriate programmatic efforts to improve oral health in these children, the Oral Health and Maternal and Child Health programs and the Epidemiology Resource Center of the ISDH have jointly undertaken to conduct an annual survey of Indiana's first and third graders regarding their oral health. While this survey has been conducted in 2000, 2001, and 2002, this article discusses the results of the 2002 survey.

Methods

A list of all elementary schools in the state of Indiana, public and private, accredited and non-accredited, was obtained from the Indiana Department of Education. This list was stratified by accreditation status and by the percentage of minority students in the school. Those accredited schools with less than 25% minority enrollment were placed in one stratum, while those with 25% or more minority enrollment were placed in a second stratum. Non-accredited schools were placed in a third stratum, as minority enrollment information was not available for these schools. A sample of schools was selected from each of these strata with a probability of selection proportional to the school's enrollment. School staff were then approached to obtain permission to conduct the survey with the students. Once this permission was obtained, the surveys were distributed to each first and third grade teacher to be sent home with the students. These surveys were collected by the teacher and submitted to the ISDH. The surveys were then analyzed using SUDAAN, and confidence intervals (C.I.) were constructed for all percentages obtained. A logistic regression analysis was also conducted using SUDAAN to determine the odds ratios for important risk factors on key questions. These odds ratios were adjusted for all other risk factors in the analysis. The risk factors studied were race, ethnicity, Medicaid enrollment, possession of private insurance, sex, and whether the child attended an urban or a non-urban school. Urban schools were defined as those schools within a metropolitan statistical area (MSA) as defined by the U.S. Census Bureau.

Results

Survey Response Rates

109 schools were selected across all strata for inclusion in the sample. The school response rate is considered to be the rate of schools that returned at least one survey. The school response rate ranged from 16% to 60% by stratum and grade, with non-accredited schools having the lowest response rates. The overall school response rate was 54% for the first grade and 51% for the third grade. These rates, while low, are an improvement over the response rates in the 2000 and 2001 surveys. On a per student basis (based on the number of students reported to be enrolled in the school by the Department of Education), the estimated student response rate ranged from 17% to 39%. The overall student response rate was 29% for first grade and 30% for third grade. Again, while low, the response rate was twice as high as it was last year. The overall estimated response rate (school response rate * student response rate) was 16% for first grade and 15% for third grade.

First Grade Survey

2,172 first grade students were surveyed, including 394 black students, 1,474 white students, and 304 students whose parents indicated the student was of some other race or multiracial, or who did not respond to the question. There were 160 students whose parents indicated the student was Hispanic. 601 students were reported to be receiving Medicaid, and 1,155 were reported to have private insurance. The following results were obtained:

- 91.7% of Indiana first graders have seen a dentist at some time in their lives. Children with private insurance are more likely to have seen a dentist than those without private insurance (adj. odds ratio 3.12, 95% C. I. 1.87-5.22). Children on Medicaid are also more likely to have seen a dentist than those not on Medicaid (adj. odds ratio 2.06, 95% C. I. 1.01-4.19). 49.0% of first graders have seen a dentist by the age 3 or younger, while an additional 28.8% have seen a dentist by age 4. 6.1% of first graders who had seen a dentist did not see a dentist until age 6 to 8. 88.8% of first graders who have seen a dentist did so for a routine screening exam. Of those first graders who have not seen a dentist, 49.6% of their parents reported the absence of any dental problem as the reason.

- 49.4% of first graders who have seen a dentist have parent reported knowledge of cavities. Children enrolled in Medicaid are more likely to have reported cavities than those not on Medicaid (Adj. odds ratio 1.86, 95% C. I. 1.34-2.58).

- 5.5% of first graders who have seen a dentist have parent reported knowledge of baby bottle tooth decay. Children enrolled in Medicaid are more likely to have reported baby bottle tooth decay than those not on Medicaid (Adj. odds ratio 3.33, 95% C. I. 1.71-6.48). Children with private insurance are also more likely to have parent reported knowledge of baby bottle tooth decay than those without private insurance (Adj. odds ratio 2.04, 95% C. I. 1.26-3.31).

- 5.8% of all first graders have a parent reported untreated dental problem, for which no treatment is scheduled. Children enrolled in Medicaid are more likely to have reported dental problems with no treatment scheduled than those not on Medicaid (adj. odds ratio 1.60, 95% C. I. 1.06-2.43). Children of Hispanic ethnicity are more likely to have reported dental problems with no treatment scheduled than those not of Hispanic ethnicity (adj. odds ratio 2.37, 95% C. I. 1.23-4.55). Of those children with reported untreated problems, 53.6% of the parents listed 'Other' as the reason for the problems going untreated, while 30.9% listed 'Could Not Afford'.

Third Grade Survey

2,235 third grade students were surveyed, including 355 black students, 1,609 white students, and 271 students whose parents indicated the student was some other race or multiracial, or who did not respond to the question. There were 166 students whose parents indicated the student was Hispanic. 543 students were reported to be receiving Medicaid, and 1,294 were reported to have private insurance. The following results were obtained:

- 95.2% of Indiana third graders have seen a dentist at some time in their lives. Children with private insurance are more likely to have seen a dentist than those without private insurance (Adj. odds ratio 2.43, 95% C. I. 1.45-4.04). Children in urban schools are also more likely to have seen a dentist than those in non-urban schools (Adj. odds ratio 2.11, 95% C. I. 1.14-3.91). Black children are less likely to have seen a dentist than white children (Adj. odds ratio 0.49, 95% C. I. 0.27-0.89).

- 53.9% of third graders who have seen a dentist have had dental sealants recommended for them. Black children are less likely to have sealants recommended than white children (Adj. odds ratio 0.49, 95% C. I. 0.34-0.71).

- 41.2% of third graders' parents report that their child has dental sealants on one or more teeth. Children who have private insurance are more likely to have dental sealants than those without private insurance (Adj. odds ratio 1.36, 95% C. I. 1.05-1.76). Children in urban schools are also more likely to have dental sealants than those in non-urban schools (Adj. odds ratio 1.46, 95% C. I. 1.04-2.04). Black children are less likely to have

dental sealants than white children (Adj. odds ratio 0.55, 95% C. I. 0.38-0.82). 45.6% of parents of children without dental sealants reported that they had no knowledge of sealants.

Discussion

This survey offers a picture on the oral health of Indiana's first and third graders. Also, with a larger sample size and better analytical tools, certain findings in previous surveys have been clarified. Key findings, which may guide the ISDH and other public health authorities in future programmatic efforts, include:

- Children with some source of insurance, Medicaid or private, are more likely to have seen a dentist by first grade than those that have no insurance. This result, also found in last year's survey, may mean that efforts to increase insurance coverage, either through private insurance or Medicaid, may be valuable to increase the proportion of children who see a dentist by first grade. This conclusion is supported by the fact that 30.9% of parents whose children had untreated dental problems said that the reason their child's dental problems were untreated was because they could not afford treatment.

- There are significant racial and ethnic disparities in the dental care patterns of Indiana's children. Hispanic children are more likely to have untreated dental problems than non-Hispanic children, and black children are less likely to have had dental sealants recommended for them or actually have sealants than white children. These results have been adjusted for insurance status and whether the child attends an urban or non-urban school, and cannot be explained by these factors. The reason for these disparities is unclear, but it may mean that more intensive, targeted education efforts are needed in these communities.

- Overall, only 53.9% of parents had said that sealants were recommended for their third grader, and 41.2% of third graders actually had sealants. If sealants are intended to be universal for all children, then it appears that increased emphasis by the dental profession is still necessary. These values have increased over the past three years, but it is unclear at this time whether this trend is significant.

- No knowledge of sealants continues to be the main reason given by parents as to why their children do not have sealants. This shows there is probably a need for more education of parents on the importance of sealants.

There are several concerns regarding this survey that should be taken into account while reviewing these results. First, the response rate at both a school and student level, while greatly improved over previous years due to increased efforts on the part of Oral Health staff, was still low. These low response rates mean that it is very possible that some form of response bias affects the results. One possible form this bias might take is that those parents who are most concerned with the oral health of their children are the ones most likely to return the survey, hence biasing the results to show a healthier populace than is actually present. A more significant source of response bias may be at the school level, where those schools that are more affluent may be more likely to agree to participate and to return surveys. If affluence is correlated with oral health, then this bias might cause the results to indicate a healthier populace than actually exists. The presence of this bias and the magnitude of its effect are not directly measurable, and it therefore must be considered when reviewing these results.

A secondary problem caused by the lack of response was a decrease in sample size from the size originally desired. The power of the study was thus decreased, which could have obscured important differences among the subgroups studied.

Increase in HIV/AIDS Reports in First Six Months of 2002

Jerry V. Burkman, R.N., M.P.H.
ISDH HIV/STD Division

There has been an increase in the number of reports of HIV and AIDS in 2002, which will soon be apparent in the HIV and AIDS reports. The provisional number of cases reported in the first six months of 2002 was 560, compared to 318 during the same period in 2001. This increase does not necessarily indicate a rise in the incidence of HIV disease or its diagnosis. During this time frame, the dates of initial diagnosis for these patients spanned 1985 to 2002. Each diagnosis was to have been reported within a week of diagnosis and by each physician and hospital that sees the patient. Each related laboratory finding was also to have been reported. Other reporting requirements also apply.

Many entities came together in 2002 to allow many previously unreported cases to be reported. Many organizations, facilities, programs, hospitals, physicians, nurse practitioners, infection control practitioners, and others worked diligently to identify the unreported cases in order to better describe the impact of HIV disease in Indiana. The result is a slight increase in the proportion of some previously underreported groups. The first obvious increase is in the number of people that were initially diagnosed in another state and have since then moved to Indiana. This increases the prevalence of HIV disease that is reported to the Centers for Disease Control and Prevention (CDC). These patients have been, and are already receiving medical and social services in Indiana. It is critical to report each diagnosis of this disease for program planning, program evaluation, and federal funding for all HIV/AIDS related programs.

The proportional increases in reported cases in 2002 were among men, whites, white males, Hispanic females, men-who-have-sex-with-men, and those of a younger age. There was very little proportional difference in the geographic distribution of the disease.

The more complete reporting enables prevention, medical services, and social services throughout the state to be planned more effectively services and to evaluate the impact of those services. All users of these data appreciate the efforts of all concerned.

West Nile Virus

James Howell, DVM, MPH
ISDH Epidemiology Resource Center

Indiana's first West Nile virus positive bird (bluejay) for 2002 was collected in Monroe County on June 5. Since that date 6 crows and 2 more blue jays have been identified as West Nile positive. In addition to Monroe County positive birds were collected in Porter, Marion, Allen, and St. Joseph Counties. Our neighboring states have also been reporting positive birds. Ohio has identified 77 positive birds in 33 counties and 6 positive mosquito pools. Illinois has reported 22 positive birds in 12 counties.

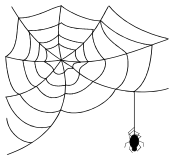
Indiana's West Nile surveillance of suspect crows, blue jays, and raptors will continue through the summer. Suspect human cases should be reported to ISDH immediately. The ISDH West Nile web site, www.in.gov/isdh/healthinfo/west_nile/index.htm will be updated with surveillance data as generated. This site, in addition to general information on West Nile virus, provides instruction on human disease surveillance and specimen submission for health care providers.

ISDH Immunization Program announces the "Fall 2002 Immunization Awards Conferences"

Date & Location	*Featured Speakers*
October 21, 2002 **Oakwood Inn Lake Wawasee** **Syracuse, IN**	**James Conway, M.D.** **Indiana University Medical School** **Donna Weaver, R.N.** **Centers for Disease Control and Prevention (CDC)**
October 23, 2002 **Lakeview Holiday Inn** **Clarksville, IN**	**Richard Clover, M.D.,** **Advisory Committee on Immunization Practices** **Donna Weaver, R.N.** **Centers for Disease Control and Prevention (CDC)**
October 25, 2002 **University Inn** **West Lafayette, IN**	**Chris Belcher, M.D.** **Pediatric Infectious Diseases** **St. Vincent's Hospital, Indianapolis** **Raymond Strikas, M.D.,** **Centers for Disease Control and Prevention (CDC)** **Donna Weaver, R.N.** **Centers for Disease Control and Prevention (CDC)**

REGISTRATION REQUIRED

Contact Sharon McGovern at (317) 514-7300 or Beverly Sheets (317) 501-5722.



Wonderful Wide Web Sites

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.statehealth.IN.gov (under Data and Statistics)

Indiana Cancer Incidence Report (1990, 95,96)

Indiana Cancer Mortality Report (1990-94, 1992-96)

Indiana Health Behavior Risk Factors (1995-96, 97, 98, 99, 2000)

Indiana Hospital Consumer Guide (1996)

Indiana Marriage Report (1995, 97, 2000)

Indiana Maternal & Child Health Outcomes & Performance Measures (1988-97, 1989-98, 1990-99)

Indiana Mortality Report (1999, 2000)

Indiana Natality Report (1995, 96, 97, 2000)

Indiana Induced Termination of Pregnancy Report (2000)

Indiana Natality/Induced Termination of Pregnancy/Marriage Report (1998, 1999)

Indiana Report of Diseases of Public Health Interest (1996, 97, 98, 99)

HIV Disease Summary

Information as of June 30, 2002 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

464	New HIV cases from July 2001 thru June 2002	12-month incidence	7.63 cases/100,000
3621	Total HIV-positive, alive and without AIDS on June 30, 2002	Point prevalence	59.56 cases/100,000

AIDS cases to date:

457	New AIDS cases July 2001 thru June 2002	12-month incidence	7.52 cases/100,000
3094	Total AIDS cases, alive on June 30, 2002	Point prevalence	50.89 cases/100,000
6712	Total AIDS cases, cumulative (alive and dead)		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in June *MMWR* Week 18-21		Cumulative Cases Reported January - June *MMWR* Weeks 1-21	
	2001	2002	2001	2002
Campylobacteriosis	48	81	137	183
Chlamydia	1,277	1,397	6,555	6,789
E. coli O157:H7	1	7	31	21
Hepatitis A	3	6	40	27
Hepatitis B	10	9	22	18
Invasive Drug Resistant *S. pneumoniae* (DRSP)	8	3	117	102
Gonorrhea	496	538	2,692	2,925
Legionellosis	4	1	8	8
Lyme Disease	2	2	4	4
Measles	0	0	4	0
Meningococcal, invasive	7	4	22	22
Pertussis	1	4	20	22
Rocky Mountain Spotted Fever	1	0	1	0
Salmonellosis	59	51	192	185
Shigellosis	12	8	119	37
Syphilis (Primary and Secondary)	18	5	75	25
Tuberculosis	9	9	44	55
Animal Rabies	0	2 (2 bats)	1 (Bat)	7 (6 Bats 1 Skunk)

For information on reporting of communicable diseases in Indiana, call the *ISDH Communicable Disease Division* at (317) 233-7665.

Indiana
Epidemiology
Newsletter

The *Indiana Epidemiology Newsletter* is published by the Indiana State Department of Health to provide epidemiologic information to Indiana health professionals and to the public health community.